

July 2015

McPherson County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 22 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the McPherson County economy.¹ These 22 sectors have a total direct output of approximately \$716 million and support 2,205.7 jobs in McPherson County. Running the model for all 22 sectors simultaneously produces the following results:

Agriculture Contribution in McPherson County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	2,205.7	10%	\$164,993,257	7%	\$715,898,361	30%
Indirect Effect	574.4	3%	\$41,830,306	2%	\$78,148,052	3%
Induced Effect	411.5	2%	\$25,170,002	1%	\$44,912,889	2%
Total Effect	3,191.6	14%	\$231,993,566	10%	\$838,959,302	35%

As shown in the above table, agriculture, food, and food processing supports 3,191.6 jobs, or 14% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$839 million, roughly 35% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 22 agriculture, food, and food processing sectors is approximately \$232 million, or 10% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 10% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

In the top ten by employment, Grain farming is the top employer in the agriculture industry with 426.8 employees. This table also shows the amount of jobs that are created by the agriculture industry in McPherson County.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income.

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Grain farming	426.8	\$101,902,587
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	336.9	\$59,540,419
Farm machinery and equipment manufacturing	314.6	\$195,181,973
All other industrial machinery manufacturing	301.0	\$80,202,866
Support activities for agriculture and forestry	167.0	\$6,898,717
Tortilla manufacturing	132.2	\$27,809,588
All other crop farming	130.1	\$11,262,374
Frozen specialties manufacturing	128.9	\$48,758,284
Landscape and horticultural services	89.8	\$4,365,406
Animal production, except cattle and poultry and eggs	83.3	\$5,759,236

The Farm machinery and equipment manufacturing industry directly contributes approximately \$195 million to McPherson County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Farm machinery and equipment manufacturing	314.6	\$195,181,973
Grain farming	426.8	\$101,902,587
All other industrial machinery manufacturing	301.0	\$80,202,866
Wet corn milling	28.1	\$63,513,835
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	336.9	\$59,540,419
Frozen specialties manufacturing	128.9	\$48,758,284
Flour milling	26.0	\$39,603,793
Oilseed farming	19.6	\$28,972,090
Tortilla manufacturing	132.2	\$27,809,588
Other animal food manufacturing	12.8	\$18,872,412

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to McPherson County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.